

We wish to extend our appreciation to those individuals who made available their material for this work. The genitalic illustrations were done by the first author.

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NEW HELIOTHID MOTH FROM THE SOUTHWESTERN UNITED STATES (NOCTUIDAE)

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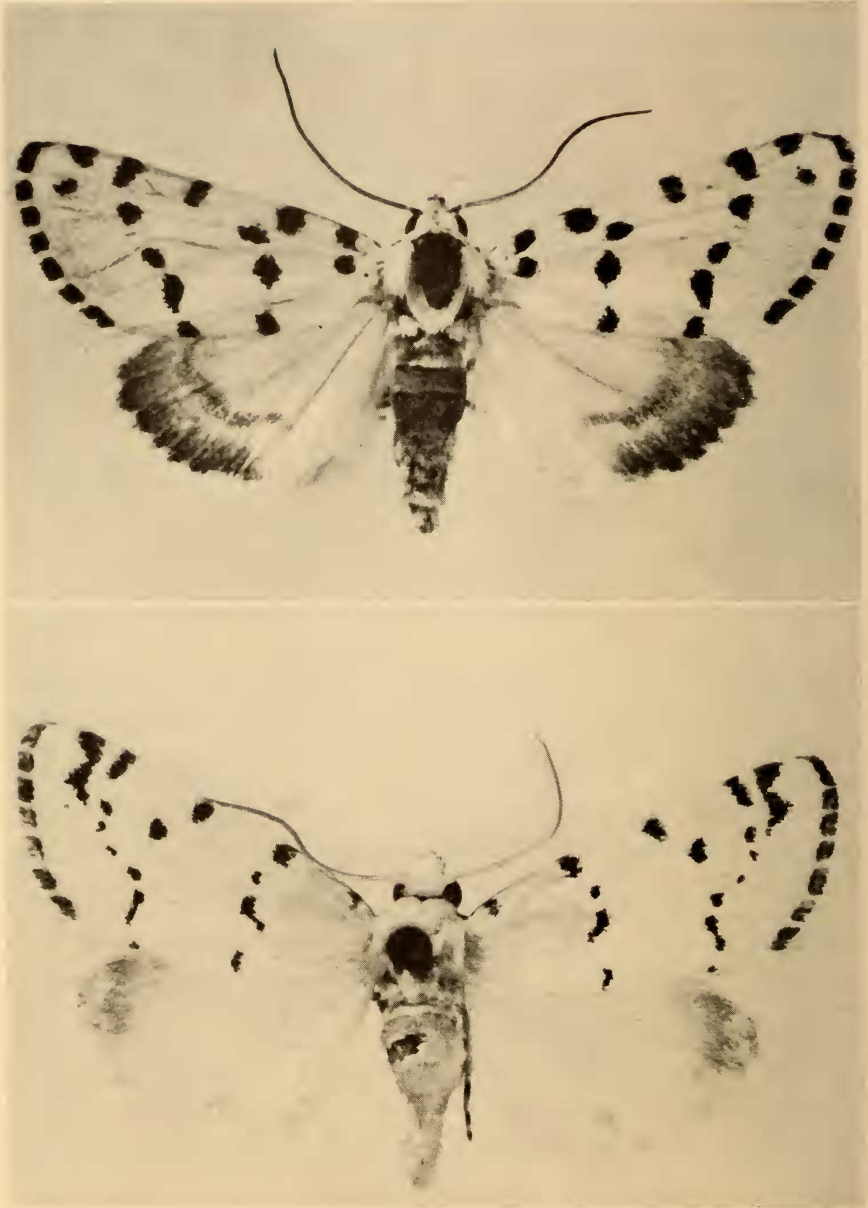
The genus *Grotella* is identified with the southwestern United States, with some records ranging into Colorado. Although adults of a number of species are regularly collected in spring or fall in association with composite flowers in semi-arid areas, the early stages are apparently unknown. Adequate records of time and place of adult flight are available, and some species are common locally. A study of larval forms should not be difficult for lepidopterists in the area and might resolve the problem whether or not the genus properly belongs in the Heliottiinae to which it is currently attributed.

In the Chihuahuan desert in 1948, the Vauries turned up a new *Grotella* (*vauriae* McE.) in the Big Bend National Park, Texas, near Hot Springs on the Mexican border. Mexican lepidopterists' interests seem primarily tropical and American visits to northern Mexico have been sporadic. With roads now more available, this area might well prove a rewarding source of new material.

The following species is described from the same part of Texas and adjacent regions in New Mexico and Mexico.

***Grotella blanchardi* McElvare, new species**

Palpi short, porrect, white with dark scaling on terminal segment. Head, thorax, and abdomen, white. Frons with typical *Grotella* hollowed-out process, having corneous walls with a truncate central process, itself slightly hollowed out.



EXPLANATION OF PLATE I

Top: *Grotella blanchardi* McElvare, holotype male, White City, Eddy Co., New Mexico, 9 September 1963 (A. & M. E. Blanchard). Bottom: *Grotella binda* Barnes, male, Redington, Pima Co., Arizona (Barnes Collection).



EXPLANATION OF FIGURES

Figs. 1-2, Vinculum and valvae of male genitalia of *Grotella*, ventral aspect; 1) *G. blanchardi* McElvare; 2) *G. binda* Barnes.

Legs with dark brown banding, particularly on tarsi. Tibiae spinose; on inner side, foretibia with a heavy, terminal spine, curved and pointed, with three or four medium lateral spines above, on outer side, a shorter heavy, terminal spine, with one or two medium lateral spines above; midtibia spined; hind tibia with one or two spines between the pairs of spurs, nearer the lower pair.

Upside. Primaries white with black spots. A series of five prominent, evenly spaced spots along costa: one near base with a spot below; second one marking transverse anterior line; third spot in medial area; fourth spot marking transverse posterior line; fifth spot marking subterminal line. T.a. line consisting of four spots, approximating a straight line, except spot immediately below costa, angled outward. T.p. line, comprising five spots, slightly bisinuate. S.t. line represented by the spot on costa and one below. Terminal line consisting of seven spots. Fringes white.

Secondaries white with a fuscous border, extending from apex a little more than halfway to anal angle. A similar narrow band inside border. Fringes white.

Underside. Primaries fuscous, the costal margin and apical area white, the three outer costal spots of the upside are present, together with those of the t.p. and terminal lines. Secondaries white with a faint row of marginal spots, extending halfway to the anal angle, with a narrow crescent above.

The genitalia have the simplicity of the *Heliotiinae*. The uncus does not have the spoon-shaped tip commonly found in this genus. The tip is cylindrical with a dorsal spine. Vinculum has a rounded base and the vesica has a few small comuti. Expanse 24-28 mm.

Holotype, male: New Mexico, White City, Eddy County, Sept. 17, 1963 (A. and M. Blanchard); deposited in U. S. National Museum, Washington, D. C.

Paratypes: 2 ♂, Carlsbad Caverns, N. M., Sept. 17, 1963; 1 ♂, White City, Eddy Co., N. M., Sept. 16, 1963; 3 ♂, west side Grapevine Hill, Big Bend National Park, Texas, Sept. 21, 1963 (A. and M. Blanchard); 2 ♂, Alpine, Texas, and The Basin, Chisos Mts., Texas, Sept., 1958 (McElvare); 1 ♀, Alpine, Texas, July 15-21, 1926 (Poling); 5 ♀♀, Big Bend National Park, Texas, Sept. 21, 1963; 1 ♀, White City, Eddy Co., N. M., Sept. 22, 1963 (A. and M. Blanchard); 2 ♀♀, La Gloria, S of

Montclova, Coahuila, Mexico, Aug. 24, 1947 (W. Gertsch and M. Cazier).

With the possible exception of the Poling and Mexican specimens, all the above were collected at lights.

Paratypes deposited in the following collections: U. S. National Museum, two ♀ ♀; the Mexican ♀ ♀ are in American Museum of Natural History, and 2 ♂ ♂ in McElvare collection; Blanchard specimens placed in U.S.N.M., A.M.N.H., California Academy of Sciences, Los Angeles County Museum, and McElvare collection; remainder in collection of A. and M. Blanchard, Houston, Texas.

In the type series, the boldness of maculation of the primaries and the bands of the secondaries varies in intensity. The bands are faint in some specimens and lacking in others, particularly the females.

In general appearance, the new species is allied to *Grotella binda* Barnes, which, however, is much smaller (19–23 mm). The maculation of *blanchardi* is bolder and on the primary it has an extra spot below the costal spot nearest the base. It lacks the spot found in the reniform area of *binda*. The secondary of *blanchardi* has two bands, of *binda* an apical patch (Plate I). The armature of the foretibia is more developed, in the new species, particularly in regard to lateral spines, and the tibia of the hindleg is spined. In the genitalia, the marked difference in the harpes is shown in the comparative drawings (Figs. 1, 2). The new species is one of several *Grotella* in which the harpes differ from the generic pattern. Most of the other species are depicted by Barnes and Benjamin (1922).

The distribution of *binda* is Sonoran, southern Arizona, ranging into adjacent areas of New Mexico and southern California. Records thus far available for *blanchardi* are all Chihuahuan, extending from Carlsbad Caverns, N. M., through Alpine and the Big Bend area of Texas to the Montclova region of Coahuila, Mexico. It may be that the difference in boldness of maculation and in size of these allied species in some degree reflects the climatic conditions in their respective desert habitats.

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